**Vaccines & Antibiotics**

PREVENTION

**Vaccines**

- Vaccines to not cure sickness, they prevent you from getting sick in the first place.

- Vaccines work by mimicking (copying) what happens during infection, but do not cause the illness.

- Vaccines use altered versions of viruses or bacteria to trigger an immune response.

- Vaccines are the most effective means of controlling infectious diseases.

- Vaccines not only protect those who get them, but also help keep diseases from spreading to others; this is called “herd immunity.”

**How vaccinations work (step-by-step):**

1. You get a shot - Ouch! ☺

2. The immune system in your body recognizes the vaccine as an invader and responds to it.

3. It creates antibodies specific to that invader, and then destroys it.

4. The invader is gone, but the antibodies remain, so if that invader ever enters your body again, you can more quickly defeat it.

5. You don’t get sick!

TREATMENT

**Antibiotics**

- Antibiotics are powerful medicines prescribed by a doctor.

- Antibiotics treat bacterial diseases once you are already sick (they do not prevent sickness).

- Antibiotics cure diseases by killing or injuring bacteria and preventing them from reproducing.

- Antibiotics do NOT work on viruses.

- Each antibiotic is effective for certain types of bacteria.

Link to Last Unit: Antibiotics and Evolution

- Take all of your antibiotic medicine or you risk creating a super strain of bacteria that are resistant to the medicine.

- If you take only part of the antibiotic, you kill off the weakest bacteria.

- The strongest, most antibiotic-resistant bacteria survive and reproduce!

- They are the most FIT for their environment.

- This means that future generations will be even harder to get rid of - sometimes NONE of our medicines can work on these super-bacteria!!!